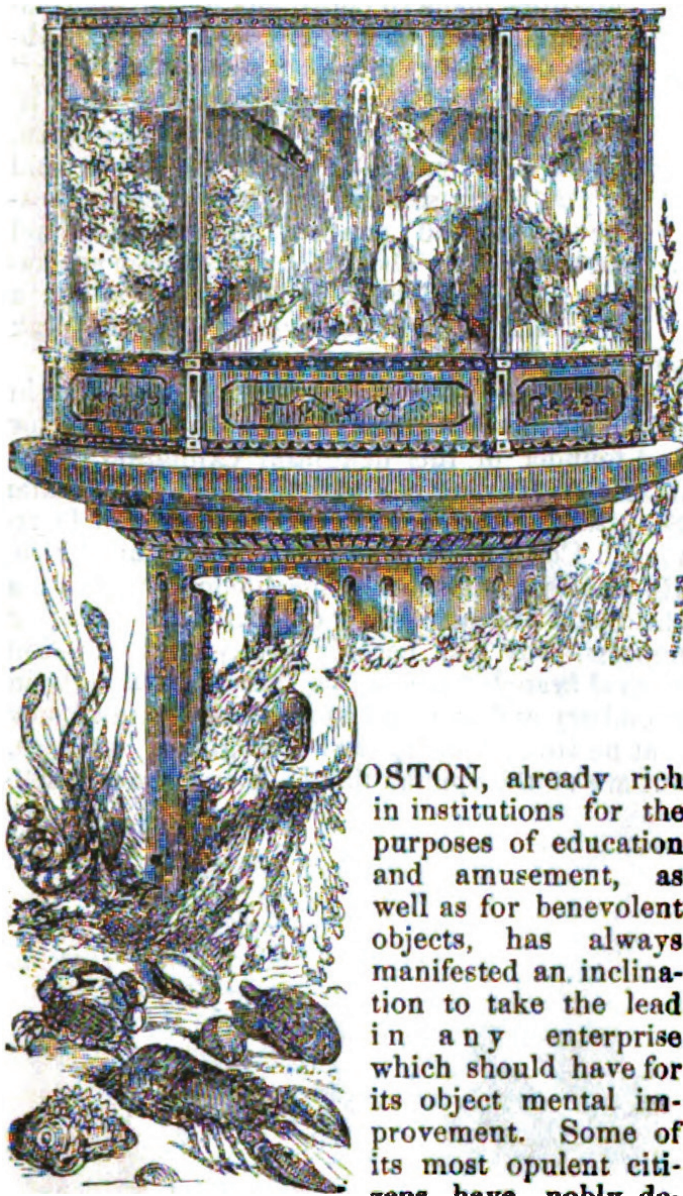


BOSTON AQUARIAL AND ZOOLOGICAL GARDENS.



BOSTON, already rich in institutions for the purposes of education and amusement, as well as for benevolent objects, has always manifested an inclination to take the lead in any enterprise which should have for its object mental improvement. Some of its most opulent citizens have nobly devoted portions of the wealth derived from commercial pursuits to the advancement of knowledge; while others have given the labors of their lives for the sake of founding museums, libraries, and lectureships. The latest, and by far the most important contribution to science of modern times is the remarkable institution of which we propose in this article to give a brief account. It is one of which Boston may well be proud. Of course, nothing but a personal visit, or perhaps a series of visits, can enable any one to fully appreciate the "world of wonders" it presents to the eye and mind; but we hope, with the aid of the artist,

to convey such general and correct ideas of this marvellous exhibition as to leave only those unsatisfied, who have not themselves actually seen it. There is nothing new, says Solomon, under the sun. Many of our modern inventions and scientific appliances are known to have been familiar, at least in principle, to the ancients, who were not quite so ignorant as we sometimes suppose them to have been. A regularly ground glass lens was found at Nineveh, probably the simple microscope of some philosopher of the times of the Pharaohs, and one of the Roman emperors was so fond of fish that he had an aquarium. As in our case, so in his, this devotion to pisciculture was a matter of taste, with the slight difference of the one being of a sensual and the other of an intellectual nature. The "noble Roman" stocked his private tanks with fish, for which the seas, rivers and lakes of the world were ransacked, in order that his table might be well supplied, occasionally fattening them with a slave or two, such articles being held cheaper than salmon or sturgeon in those good old times. In our days, we keep the finny tribe for the purpose of learning new chapters in natural history, and of beholding in all its wondrous beauty and rarity, life beneath the waters.

Towards the close of the last century, Doctor Priestly suggested that it might be as easy and interesting to study the habits of fishes as of birds. In 1789 Ingelhaus expressed a similar opinion, but that was all. Doctor Dauberry wrote an article on the subject in 1833, and in 1837 Mr. Ward, the inventor of Ward's Cases for plants, took up the subject. In 1842 Doctor Johnston made some experiments in pisciculture, but only partially succeeded. Doctor Lankester and Mr. Warrington followed in the same track in 1849 and 1850, with more success, and demonstrated the possibility of the pursuit. But it was reserved for Mr. Philip Gosse to overcome all difficulties in 1852, and so to perfect the aquarium, as at once to make it as popular as the aviary. In a very short time after the publication of Mr. Gosse's book on the subject, aquaria were almost as often to be found in drawing-rooms as were bird cages. The old-fashioned glass globe was discarded, and elegant tanks, stocked with fishes and flowers of the sea, took their places. Before proceeding further, it may be as well to state what an aquarium is. In keeping gold-fish in globes, it was necessary fre-



DEER FROM THE PHILIPPINE ISLANDS.
(Living Specimen at the Aquarial Gardens.)

quently to change the water, because it lost its vitalizing power. Now, in the aquarium, the water is not changed at all, but vitalized over and over again, in a manner which will be by-and-by explained. In all other aquaria than those at these Gardens, the water is vitalized by vegetable action. It must be remembered that animal life absorbs oxygen, and throws off carbonic acid gas. Vegetable life, on the contrary, absorbs carbonic acid gas, and throws off oxygen. What one rejects the other needs. The vegetable furnishes oxygen to the fishes, and the latter in its turn, carbonic acid gas to the plants, so that the animal and vegetable are mutually dependent on each other. In the Aquarial Gardens, however, a new process for aerating the water is used, and no aquatic plants whatever are required for any other purpose than that of ornament. An aquarium, then, is a receptacle for aquatic animal life in fresh or in salt water, which need never be changed.

Having given this brief introduction, we will now proceed to give some account of the rise, progress, and present condition of the BOSTON AQUARIAL AND ZOOLOGICAL GARDENS. For some time previous to the year 1859, Mr. James A. Cutting had revolved in his mind the idea of founding in Boston an aquarium on a grand scale. Until then the collections of fishes, and aquatic wonders generally, had been made in small tanks, and were little better than pretty scientific toys. No one had, as yet, turned the idea to practical purposes, the elegant,

miniature fish-ponds were comparatively useless. Mr. Cutting, on being satisfied that the principle of the aquarium had been fully established, determined to develop it to its fullest extent. If, he reasoned, a minnow can be kept alive and healthy in its native element, why not a monster of the deep? If a shrimp, why not a shark? Satisfied of the justness of his conclusions, in spite of dismal prophecies of failure from some, and incredulous smiles from others, he worked persistently, and on the sixth day of April, 1859, the sanguine and successful natural historian boldly ventured before the public. The announcement of the opening of the Aquarial Gardens in Bromfield Street, fairly took Boston by surprise. People were not prepared for the idea that fish could be exhibited like birds and beasts—their habits studied at pleasure, and their countless varieties and peculiarities made to contribute to our information and amusement. For once, that much-to-be-wished-for thing, "something new," was found, and everybody rushed to see it. What was the surprise of the gazers, when, for the first time, they beheld corallines and polyps, water-soldiers and hermit-crabs, sea-cucumbers and starfish, water-beetles and sea mice; and above all, the strange spectacles of a stickleback building his nest like a bird, and of actiniae, whose delicate pink petals rivalled the roses of earth!

Before proceeding further, it may be proper in this place to say a word in regard to the projector and founder of this delightful exhibition. Mr. James A. Cutting is a native of the old Granite State, having been born under the shadow of Dartmouth College, at Hanover, New Hampshire. He was by profession a mechanic, but from his childhood had not only "dabbled" in scientific matters, but had become pretty well versed in several branches pertaining thereto, especially in chemistry and natural history. We do not know that he studied under any recognized teachers, but are of the opinion that he is essentially a self-



SACRED BULL AND COW OF THE HINDOOS.
(Living Specimens at the Aquarial Gardens.)

made man. A few years since, Mr. Cutting gave his attention to the production of sun-pictures, and to him we are indebted for the invention of the ambrotype, photography and photolithography, which he patented, disposing of the right for \$40,000. Afterwards he became interested in the aquarium, and having received the generous encouragement of Professor Agassiz, who warmly approved of the scheme, built up the "Gardens," and placed before the public the first and greatest exhibition of the kind in the world; for though there are large aquaria in London, Dublin, Paris and other great cities, not one of them can for a moment compare with the present splendid collection in Central Court. As in all novel enterprises of the kind, in starting this one Mr. Cutting had many and serious difficulties to encounter at almost every step of his progress. Among these, that of properly constructing tanks was not the least formidable. This obstacle surmounted, came the vast trouble and expense of stocking them with rare specimens, which had to be collected from many sources. And this also accomplished, the difficulties were by no means at an end, for it was far more troublesome to preserve the specimens when obtained, than to procure them. Few who now behold the exquisitely clear tanks, and their healthy contents, can imagine what untiring energy, and scrupulous care it takes to keep them in so beautiful a condition. It may with strict truth be said, that from the smallest to the largest fish in the collection, there is not one which does not require, and does not receive daily, and some hourly attention, and which would not inevitably perish for the want of it. Interesting as the exhibition appeared at its commencement, it was, as compared with what it is at present, meagre enough. Mr. Cutting opened with a few tanks, constructed on the original idea of a natural aquarium, by which is meant one in which the water is

supplied with the oxygen necessary to keep the fish alive, from aquatic vegetation. This process was attended by many and serious difficulties, not the least of which was the turbid state of the water caused by partially decomposing vegetable matter, thus destroying half the beauty of the spectacle, just as a landscape is dimmed by being seen through a dirty window-pane. Only by employing a little army of scavenger snails, which devoured the decayed particles of the plants, could anything like clearness be obtained. Mr. Cutting determined, if possible, to do without these scavengers, who performed their work slowly, and by no means completely after all. The result of Mr. Cutting's investigations and experiments, was the present entirely satisfactory process of aerating the water, by bringing it through the medium of a peculiar arrangement, at once in contact with the vitalizing element. Visitors to the Gardens will ob-

serve that through the water in every tank, rises a column of air bubbles continually. Every little bubble contains oxygen gas, a portion of which it transmits to the water, which is thus charged with the gas absolutely necessary to the existence of the fish. It is, in fact, a life stream, which, did it cease to flow, would leave the water a poison-pool for the pretty creatures that swim therein. This process has been patented by Mr. Cutting, and must be considered as the greatest of aquarial improvements, inasmuch as it entirely does away with the necessity of using encumbering vegetables, and thus secures health and beauty to the creatures exhibited.

We have heard much about taming—lion-taming, horse-taming, and even industrial flea-taming—but from the "Taming of the Shrew" even until now, we fancy the greatest curiosity in this line to be seal-taming. Who, when looking at

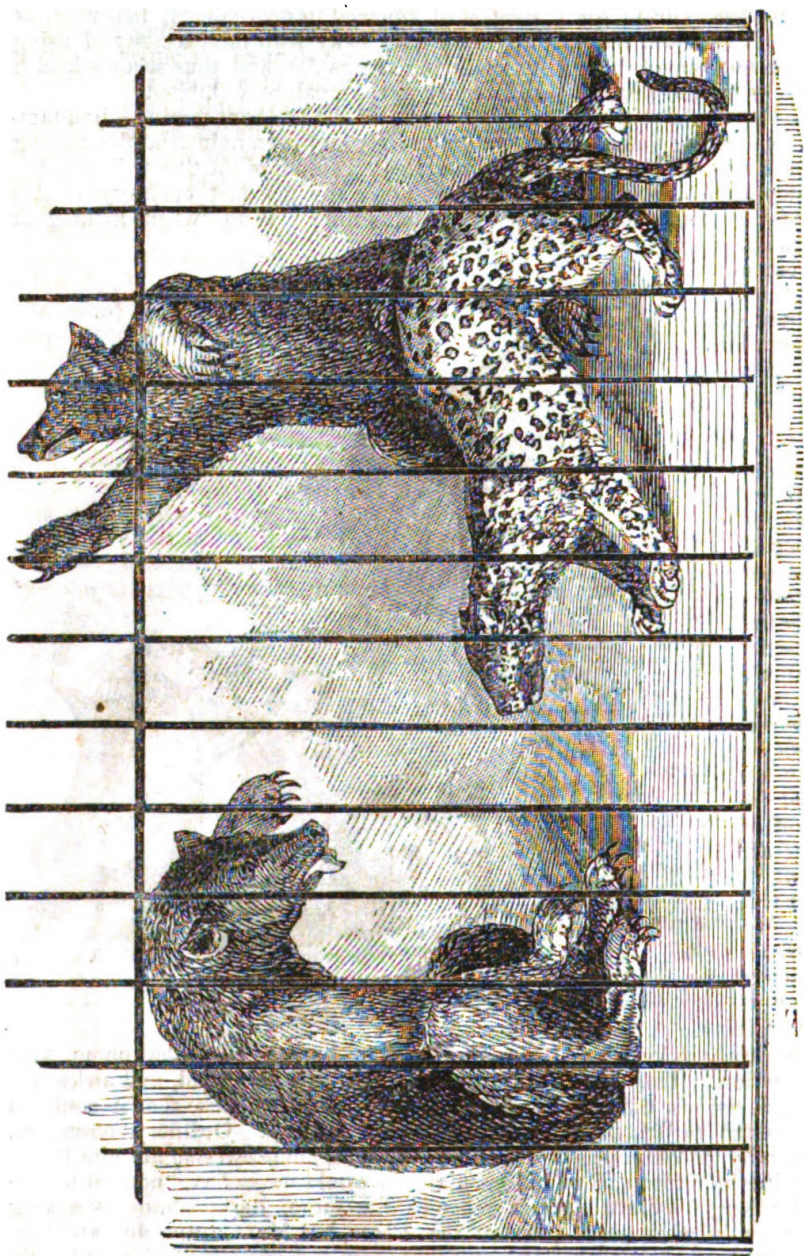


THE KANGAROO.
(Living Specimens at the Aquarial Gardens.)

the queerly-shaped creature of that name, with its strange body, dog-like head, and awkward-seeming flippers, would suppose that it could be made as docile as a dog? Ordinary observers, or see-ers (for *seeing* and *observing* are totally different matters) would never have noticed the intelligence in the large, dark, almost speaking eye of the *Phoca*, but Mr. Cutting did, and feeling sure that there was something akin to intelligence in the big brain behind them, he proceeded to half-civilize a pair of seals which he soon exhibited as "learned" individuals who had graduated at an amphibious university. And, certainly, the queer pupils did credit to the enthusiastic and ingenious professor, for they played on a hand-organ, turning the crank with their fore-flippers, made bows to the gentlemen, threw kisses to the ladies, and seemed to do everything but speak. Never had there been such an attraction in Boston before, and to see the "learned

seals," Fanny and Ned, strings of carriages daily disgorged their contents at the foot of the long staircase in Bromfield Street. One of the seals (the other died, possibly from too intense application to intellectual pursuits,) "still lives," and daily holds a levee in Central Court, furnishing his own music, and giving testimonials of his talent "under his own hand and seal!" This *Phoca*-ization, as it may be termed, was not the

There were always crowds around the cage containing the "happy family," as the curious collection was called, in which dogs did not "delight to bark and bite," but conducted themselves with canine decorum, and cats almost persuaded us that it was not "their nature to" pounce upon predatory mice, or favorite canaries. It was quite a millennium in miniature, and "took" surprisingly. The Bromfield



PANTHER AND BEARS.
(Living Specimens at the Aquarial Gardens.)

Street exhibition having been now fairly started, and eminently successful, its proprietor, determined to spare no pains to still further improve it, travelled, with assistants, to Florida, a region particularly rich in rare animals, reptiles and fishes, in order to procure supplies for the Gardens. It was an anxious, expensive and laborious undertaking, but success crowned it, and Mr. Cutting returned to Boston laden with piscatory and other treasures, among which were some exquisitely lovely angel-fish, the first ever brought alive so far north. To the attractions of the gallery were, about this time, added several fine microscopes, furnished with living and dead objects, in which the circulations of the blood, and of the sap, could be leisurely studied. These were placed under the superintendence of Mr. S. N. Chamberlain, whose skillful manipulation was highly appreciated by the delighted visitors. Mr. Chamberlain is still an active and valued employee at the

only strange feature in the Bromfield Street exhibition, for the public were treated to the odd spectacle, not only of "birds of a feather not flocking together," but of cats and mice, hawks and sparrows, ferrets and rats, eagles and rabbits, and of all sorts of animals of antagonistic natures, living in harmony and happiness together. It was the queerest specimen of a tenant-house ever seen, and somewhat reminded one of the great ark-assemblage of Noah's time.

Gardens. Determined not to confine his exhibition to carp, trout, pickerel, and "such small deer," Mr. Cutting resolved to have a "Triton among the minnows" in the shape of a shark, and having commissioned some fishermen to procure one, he built a large central tank for its reception. The savage fish, six feet in length, was soon captured, and placed in his new quarters, where he swam in sea water, daily brought for the purpose, from the harbor. His sharkship

caused a great sensation as he swam round and round his crystal prison, exhibiting his cold, cruel eye, savage mouth, and long dorsal fin to the gazers around. It was the first domesticated shark on record, and many a horrible "fish story" was brought to the minds of the half-fearful people who stood round his tank. So great was the attendance daily at the rooms, that Mr. Cutting now began to think of enlarging his bounds. He had encountered many obstacles, and had mastered them, but his premises were not elastic, and so he could not stretch them, in order to afford accommodations to the daily increasing crowds of visitors. Besides, as he had succeeded with the shark, he wished to fly at higher game, and "bag" a bigger fish still. We read of some one, who certainly was about the greatest of anglers, for it is said of him:

"His hook he baited with a dragon's tail,
And sate upon a rock, and bobbed for whale!"

Now Mr. Cutting did not aim at such a monster-catching process, but he determined to add a whale to his exhibition, and with him to decide was to *do*. But when the whale was caught where could he be put? The question suggested the expediency of erecting a building specially for aquarial exhibition purposes, and with characteristic energy Mr. Cutting began the search for a suitable site. After due consideration, the present one in Central Court was fixed upon, as more than any other combining all the peculiar requirements for such a purpose. The necessary arrangements were soon made, and the present beautiful edifice was erected by Mr. Andrews, under the general superintendence of Mr. Cutting, who paid the most minute attention to every detail. A more complete and commodious structure for a special purpose cannot anywhere be found. Its erection involved an outlay of \$50,000. The building is divided into an upper and a lower hall, in the former of which is a deep gallery, and connected with it a spacious stage, on which occasional scientific lectures are delivered, and scientific exhibitions conducted, as for instance, the stereophan, which is now being shown at the Gardens, and attracting vast audiences to behold gigantic stereoscopic views of foreign and domestic scenes, statuary, etc., displayed on 800 feet of brilliantly illuminated canvass. In the lower hall is a splendid collection of fine living zoological specimens, and a ring for the performance of trained animals. On entering the main hall, the object which first strikes the eye, and elicits the wonder and admiration of the visitor, is the great central tank. This magnificent reservoir, or "miniature ocean," as it has been not inaptly called, is a perfect triumph of aquarial architecture. Some idea of its general appearance, though not of its magnitude, may be gathered from the vignette at the commencement of this article. Its framework is constructed of beautiful marbleized slate, and is divided into 18 compartments or panels, each of which is filled with a single monster pane of plate-glass of one inch in thickness. The glass was made for this

special purpose in Europe, and imported to this country at an expense of six thousand dollars. The tank is no less than thirty feet in diameter, and six feet deep. It contains upwards of twenty-two thousand gallons of water. To fill this huge receptacle with fresh water, would have been easy enough, but as Mr. Cutting intended to place a whale in it, and as whales do not generally live in Cochituate fluid, it became necessary to devise some means, not only of furnishing the tank with salt water, but of procuring a constant supply of the briny element. Central Court is situated three fourths of a mile from Boston Harbor at the nearest available point. It was certain that the whale could not be taken thither to enjoy his daily change of fluid, therefore it was decided, as Mahomet could not go to the mountain, the mountain should come to Mahomet. To speak without trope or metaphor, as the whale could not visit the sea, the sea should rush to the residence of the whale. Fresh water could be conveyed long distances in pipes, and so then could salt water; accordingly, iron pipes, carefully lined inside and outside with cement, were laid down under the streets, from the harbor at the foot of Summer Street, to the building at Central Court, a work involving no small labor and expense, \$10,000 at least, having been expended on this item alone. At the harbor terminus of the pipe, a steam-engine of twenty-horse power was erected to pump up the water, and send it along the underground channel. Another steam engine of twelve-horse power was



THE SPHYNX.
(Living Specimen at the Aquarial Gardens.)

put up at the Gardens ; this latter forces the sea water into the great reservoir on the roof, which supplies the tank, and the fountain in its centre. By means of these appliances, fresh sea water, to the amount of eight hundred and sixty thousand gallons, passes daily through the central and smaller tanks, of which there are about sixty-five in numbers, all beautifully formed of marbleized slate, and the sides of the clearest plate glass.

the advancement of natural science." No more fitting orator could possibly have appeared on such an interesting occasion, for Professor Agassiz has made ichthyology his *specialité*, and as a lecturer, he is one of the most fascinating, as well as the most profound living. We regret that our limits forbid even an abstract of his brilliant address.

When Mr. Cutting avowed his intention of



THE SPHYNX RIDING THE RING AT THE AQUARIAL GARDENS.

On the fourth day of October, 1860, the new building was opened to the public. It was most felicitously inaugurated by Professor Agassiz, who, as we have already stated, so warmly interested himself in the success of the undertaking. The audience consisted of the *élite* of Boston and its vicinity, who listened delightedly while the professor delivered a charming *viva voce* address on "the advantages of such an establishment for

introducing a living whale into his great tank, he met in many quarters with ridicule and skepticism. "Very like a whale," was quoted as a sneer ; but what cared he ? It *could* be done, and done it *should* be. And before long the marvelous feat was accomplished, in a manner which deserves to be particularly noted.

Mrs. Glasse, in her cookery-book, when giving directions how to cook a hare, says—"first catch

your hare" The aquarial skeptic surveying the big tank, said to Mr. Cutting—"first catch your whale!" Mr. C. took the advice, which happened to chime in with his own notions, and proceeded to capture one. Not in the old-fashioned harpoon manner, but in a whale trap, as will presently be seen. He was sanguine on the subject, and this ensured success.

There is a species of whale well known to frequent the Gulf of St. Lawrence at certain seasons of the year, for the purpose of following and feeding on the immense shoals of a small fish called the capelin, that abound in those seas. These whales, in the act of catching, are often themselves caught in weirs constructed for the purpose, from which, when they once enter there, they can only with great difficulty emerge. They are taken for the sake of their oil and skins. The patent right to take these whales belongs to Charles Tetu, Esq., of Canada, and to this gentleman Mr. Cutting travelled, and applied for permission to procure a whale for his Aquarial Gardens. Mr. Tetu was mightily amused at this proposal, and combated its feasibility; but Mr. Cutting was not thus to be diverted from the object he had in view. At length Mr. Tetu promised that at the next high tides, if a whale got into the weirs, Mr. Cutting should have it; but as for taking it alive to Boston, so great a distance, the thing was too ridiculous to be thought of.

Well, Mr. Cutting returned to Boston, and not long afterwards came to him a telegram announcing that a whale was in the weirs. Flashed back the announcement over the wires that Mr. Cutting would be after him. After him, with assistants, he went; and on his arrival at the gulf shores, sure enough, there was the monster—a white whale, full of health and vigor.

The next thing to be done, was to convey him overland to Boston. In order to do this, a wooden tank rather longer than the whale, and deep enough to hold him, coffin-wise, was made. This was partially filled and lined with seaweed, laid on its side, and about fifty men rolled the whale into it—not, however, without his protesting against such liberty by sundry lashings of his powerful tail. Once in the box, he was well packed with weed, and placed on a truck on which he was carted twelve miles to the nearest railroad point. Here Mr. Cutting had chartered a special engine and truck, on which latter the whale in his box was placed, and away went the train with its novel freight (now approximating to the flying fish) to Quebec, and from thence on the Grand Trunk Railway to Portland, Maine, and finally to Boston, where the whale, having had water thrown over him every now and then, during his long journey, arrived safely and in excellent condition—being the first living whale that had ever travelled on a rail.

In anticipation of the monster's arrival, a derrick had been raised over the great tank, and the wooden box being lifted to its edge, the whale was tumbled into its new residence, where it is now "quite at home." It must have been a proud moment for Mr. Cutting when he saw his labors thus crowned with success, and his prize safely deposited in the crystal reservoir which had been built for him.

The following letter will, in connection with this subject, be perused with interest. It was addressed to the editor of the Boston Journal:

Cambridge, May 25, 1861.

DEAR SIR:—It gives me pleasure to comply with your request to furnish you with some information respecting the White Whale now in the aquarium of Mr. Cutting, in Boston. This animal is an inhabitant of the northern seas, its lowest range being the Gulf of St. Lawrence.



THE WALRUS.
(Stuffed Specimen at the Aquarial Gardens.)

Martens, in his journey to Greenland and Spitzbergen in 1671, was the first to give an accurate account of this species, under the name of "Weissfish" (white fish), the name of fish being applied in earlier days to all marine animals. Like the Sperm Whale, the Right Whale, and the Porpoise, however, it belongs to the class of mammalia, and not to that of fishes. The first systematic name it received was "Balaena albicans" (the Whitefish Whale), so called by Klein, a contemporary of Linnaeus, on account of its whitish color. But since the family of whales embraces a number of distinct genera, it was afterward called "Delphinapterus," by Lacepede; and still later, "Beluga," by Gray. Accounts of its habits, more or less extensive, may be found in the works of the Arctic voyagers, especially in Grant, Egede, and Scoresby, and scientific descriptions in Fabricius, Shaw, Cuvier, etc. I congratulate Mr. Cutting heartily



PORTRAIT OF MR. CUTTING.

upon having succeeded in bringing to Boston, alive, so interesting a specimen. Indeed, it is no mean achievement to have brought into a populous city a living whale, and to have put it up for exhibition in a glass tank—even though that whale be neither the right whale nor the sperm whale, but a smaller species, rarely exceeding twenty feet in length, though specimens forty feet long have been captured. It has already afforded me the means of much valuable information, and I trust it may afford as much pleasure to others, to see it turning round and round in its large tank, and now and then coming to the surface to breathe, or blow, as is the phrase with the cetaceans.

Very respectfully yours,

L. AGASSIZ.

It may easily be imagined that so vast a creature consumes a large quantity of food. Sixty pounds of live eels are disposed of in three meals daily, and he seems to thrive finely.

The next acquisition to the Gardens was a superb dolphin, ten feet long—not the common dolphin, but the fish described by Professor Agassiz as the most intelligent creature next to man. Possessed of this splendid creature, Mr. Cutting became poetical as well as practical, and resolved to realize the poet's dream. "To this intent" he had a lovely fairy boat constructed (by one of our first Boston boat-builders) in the shape of a Nautilus-shell, to which he intended

to harness the dolphin, which should be driven by a young lady, fittingly attired, round the great tank. The harness was constructed, and the trial was made—it succeeded a *merveille*, but before the novel exhibition was made public, the dolphin died of dyspepsia, it having injudiciously swallowed a number of iron nails that lay at the bottom of the tank. This was a damper, but why not harness the *whale*? The question was considered, and the monster was measured for collar and traces. He took to them both kindly, and a piquant little piece having been written, the services of Neptune and Triton were enlisted, and Mademoiselle Leone, a charming young lady of Boston, boldly entered her boat, and drove the whale as deftly as if he had been the tamest of ponies. The success was at once very great, and the attraction continues unimpaired to the present time of writing. The idea of harnessing and driving a whale was a bold one. No one but a live Yankee would have dreamed of such a thing, or carried it out to a successful issue.*

To vary the attractions, and gratify ethnological students, five Africans—a Hottentot, Bushman, Fingo, Zulu and Kaffir—were retained for some months

at the Gardens. They attracted great attention.

Near the great tank is the stuffed skin of an enormous walrus, or sea horse—the only one ever exhibited. Mr. Cutting hopes before long to have a living specimen of this interesting creature in the Gardens. Even as a *stuffed* specimen, this is unique.

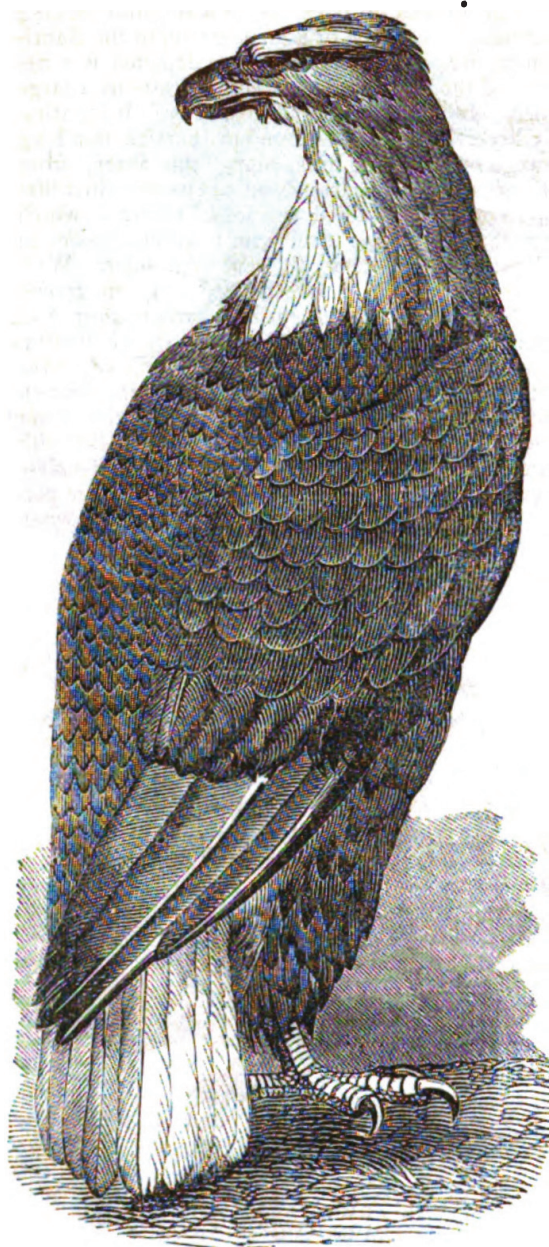
Around the great tank are about sixty-five smaller tanks, all filled with "the treasures of the deep." There is not one of these receptacles which might not furnish material for hours—indeed days of study. Neither books, lectures, nor plates, however correct, can convey a tithe of the instruction which a mere stroll through the Gardens may impart, and which no other establishment of its kind in the world can provide.

Leaving the upper, we descend a broad and handsome flight of stairs to the lower hall, which is devoted to the Zoological Department. On the floor of this apartment is the great seal tank, where *Ned* disports, and a spacious ring in which the famous horse Abdallah goes through his very pleasing and extraordinary performances, in connection with that remarkable animal of the Simian tribe—the "sphinx." This rare variety of the baboon species is supposed to be identical with that worshipped by the ancient Egyptians, and color is given to this sur-

* Mr. Cutting procured several other whales, but they all died. The one now on exhibition is the only animal of the kind that has ever been successfully exhibited.

MADMOISELLE LEONE DRIVING THE WHALE, AT THE AQUARIAL GARDENS.





THE AMERICAN EAGLE.
(Living Specimen at the Aquarial Gardens.)

mise by the fact that a very strong resemblance is traceable between it and some of the hieroglyphical designs to be found on Egyptian sculptured tablets, especially when the animal is in repose, which, however, is not often the case.

Dr. U. W. Sears, under whose very able superintendence the animals are placed, is well known as one of the most skilful brute trainers in the world. He seems to exert almost a supernatural power over them, and subdues them to his will without any apparent effort. His mastery of Abdallah is worthy of Rarey himself, and the entire command he has over the sphynx is perfectly surprising. We well remember the latter when it first arrived at the Gardens—a dull, obstinate, seemingly unteachable brute. Now, however, he is one of the great cards of the institution. Nothing can be more amusing than his

equestrian feats, whether he appears as a volunteer, flag in hand, or as a fast young man on a hired horse. Then his other performances in the ring are infinitely grotesque. He wheels a barrow, personifies laziness to the life, feigns insensibility, carries a heavy log, mounts a pole, and travels around the ring on the hand rail. In short, he is a laughable burlesque on humanity in a cocked hat and breeches.

The kangaroos also exhibit their long hind and short fore legs, and their thick tails in the ring, where they take prodigious leaps and bounds; and the young moose from the State of Maine also trots around, leaps over a cross bar, and shows his ungainly proportions. All these Dr. Sears seems to do what he likes with—as he does, indeed, with all the animals, the great cinnamon bear and the fierce panther not excepted. To him they are docile as kittens, but woe to the visitor who carelessly ventures to insert a hand between the bars of their cages.

Recently a pair of elephants performed some amazing feats at the Gardens. We hear that they will at no distant period again make their appearance, for it is the aim of Mr. Cutting to produce a constant series of novelties.

One of the most attractive animals in the Zoological Department is the zebu or Indian cow, with the bull calf. The male of this species is the Sacred Bull of the Hindoos, and so much is it revered by them, that it is death to destroy one. Even when one of them lies down in a crowded thoroughfare, rather than disturb it, the richest rajah will walk out of its way. The cow here exhibited, is of a delicate silver gray hue, with large, soft eyes, and is a great pet of the lady visitor.

Many of our readers will remember the recent offer of the King of Siam to send some elephants to the President of the United States. The present was declined, just because the animals would have been of no possible use for breeding, in this climate. The president, perhaps unconsciously, avoided a dilemma into which the mayor of a certain English city fell. Thus goes the story:

The Mayor of B—, anxious to be on good terms with his brother civic-magnates, used annually to send to the Lord Mayor of London the first fine salmon caught in the river Severn. In receipt of a certain superb salmon, his lordship of London returned his thanks, and intimated that he would “send an equivalent.”

“My dear,” exclaimed the Mayor of B—to his wife—“what do you think? The lord mayor is so pleased with the salmon I sent him, that he is going to send me an elephant.” The lord mayor’s calligraphy was crooked, and the Mayor of B— was not an expert. So the mayor built a very expensive house for the huge animal, but just as he had finished it, a friend discovered the civic mistake. “Phansy his feelinks!”

Now, although the president did not require to “see the elephants,” Mr. Cutting, in the spirit of the enterprise, did, and he forwarded the following letter to the sable sovereign of Siam. It was splendidly written on vellum, enclosed in a sandal wood case, duly sealed, and with it were sent splendidly drawn views of all the wonders of the Aquarial Gardens. If Mr. Cutting does not receive that rarest of regal gifts, a pair of

white elephants, we shall be disappointed. That will be an *equivalent* indeed.

To his Majesty and great Ruler, the King of Siam.

Your majesty's letter to the President of the United States, accompanied by the noble gifts bestowed upon him, has been printed and sent among his people. By it they have learned of the generous offer made by your majesty to send elephants to be "let loose, to increase and multiply" in his dominions. His people have also read his reply declining the offer; they regret that because of the climate the elephant cannot increase in our country, nor be made useful; and that thereby they cannot be permitted to see these wonderful quadrupeds, natives of your domains. Very many of the people here have never seen such animals, and do truly "run by thousands to gaze upon them," when by chance a specimen has been obtained, which is indeed of great rarity.

Now, the undersigned, most respectfully, would represent to your majesty that he has erected a large building in the city of Boston, and in the State of Massachusetts, U. S. A., for the purpose of gratifying the thousands of people, by collecting animals from all countries, including birds, fishes and plants, wherein he has constructed apartments for the various kinds, cages for the beasts and birds, as well as tanks for the fishes, the latter being constantly supplied with water from the sea, pumped up from the harbor, through pipes laid under the streets, to the quantity of 800,000 gallons per day. He has so far succeeded as to place in one of the tanks, now alive and healthy, a *whale*, weighing over 1200 pounds, and measuring sixteen feet in length; he has also, by great patience and perseverance accomplished the extraordinary feat of harnessing the whale and driving him around the great glass tank, of which a truthful picture is transmitted herewith. The surrounding tanks contain a large variety of fish, submerged vegetation etc., obtained from far and near, while in a hall below he has collected a great many specimens of rare foreign as well as domestic animals. The design of the whole institution being intended for the advancement of the sublime study of natural history, and for the purpose of affording to the people, old and young, a place of resort blending instruction with amusement.

In view of the above facts and the munificent offer of your majesty to our chief ruler (the president), the undersigned would respectfully request that your majesty will place upon some ship for the purpose above named, one pair of young elephants, male and female, the expense of transportation to be incurred by him. And in conclusion, while expressing in behalf of the public his gratitude for your majesty's condescension, he would take equal pleasure in exchanging for exhibition in your majesty's kingdom, such animals indigenous to our country as would be a source of wonder to the people of Siam.

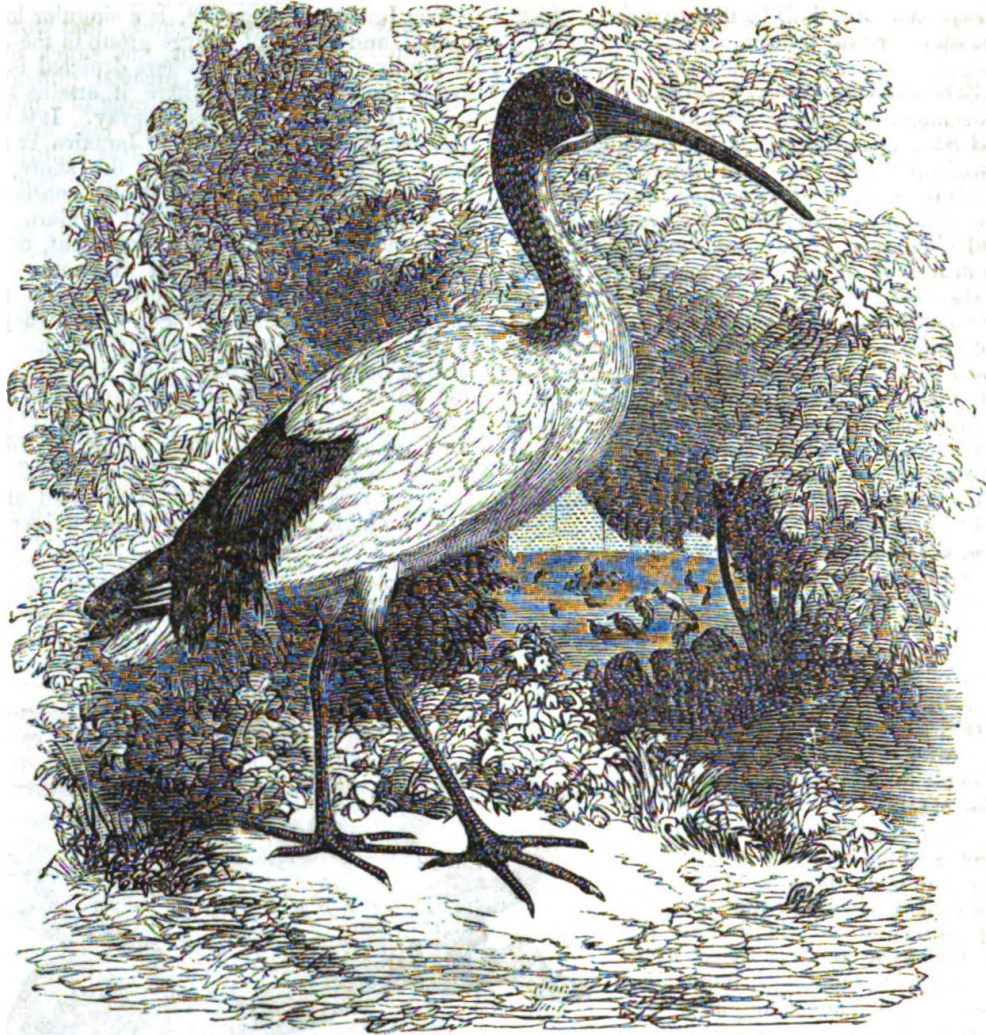
J. A. CUTTING.

The Iguana on page 18, is a singular looking animal, and a type of a large group in the Saurian family. The specimen here depicted is a native of the West Indies, where it attains a large size. In color it is a greenish gray. It is entirely herbivorous. It is found in Jamaica, in a long range of limestone hills, along the shore, from Kingston to Goat Island on to its continuation in Vere. The allied species of *Cyclura* which are found on the American continent, occur in situations of a very different character. With us they are found in forests bordering on rivers, and the woods around springs, where they live partly on the trees, and partly in the water, feeding on young herbage, and living on fruits and leaves. Lazily stretched along the branch of a tree, they devour all the fruit within their reach, seeming to enjoy their luxurious life with an epicurean zest. They are perfectly inoffensive, never preying upon kindred lizards, and are perfectly amiable in their deportment, unless when



THE ARMADILLO.
(Living Specimen at the Aquarial Gardens.)

crowded on. Then they are excessively belligerent, and, using their formidable serrated tails as a weapon of defence, cut about with the ferocity of dragoons. These reptiles are thus characterized by Cuvier; body and tail covered with small imbricated scales; the edge of the back garnished with a row of spines, or rather of elevated, compressed and pointed scales; under the throat, a compressed and depending dewlap, the end of which is attached to a cartilaginous appendage of the hyoid bone. Their thighs are provided with a similar arrangement of porous tubercles with the true lizards, and their heads are covered with scaly plates. Each jaw is furnished with a row of compressed triangular teeth, having their cutting edges serrated; there are also two small rows on the posterior part of the palate. There are many specimens described by naturalists, most of which are natives of tropical America. The female deposits her eggs, which are about the size of a pigeon's egg, in the sand.



THE SACRED IBIS.
(Living Specimen at the Aquarial Gardens.)

Many of the species are considered as great culinary delicacies by the natives of the country in which they are found. It is caught by the means of a noose attached to the end of a stick. It is very active, though when it has taken refuge in a tree, it appears to depend on the security of its situation, and permits itself to be taken by its pursuers.

The last picture in our series shows a view of Gore Hall, Cambridge, Mass., as seen in the stereophan at the Aquarial Gardens. It is an edifice well known to all residents in this vicinity. It is built entirely of granite, and contains a choice library of 90,000 volumes. This building has been much admired for its architectural elegance.

But time would fail us to tell half of the attractions at this delightful place of instruction and amusement. We have often visited it, and hope to do so many times more, for it always has something fresh to present to the eye and the mind. A few weeks since, Professor Agassiz delivered a series of six lectures on natural history illustrated by living animals in the establishment, in the course of which he said that he "never visited the Aquarial Gardens without learning something;" and if such be the admission of the first natural philosopher of his age, we may be

quite certain that for us there is a wonderful store of instruction to be found there. It is an exhibition to which no one can go without being wiser and better for the visit. There amusement goes hand in hand with information of the most useful and attractive kind, causing the Gardens to be invaluable, even in an educational sense. There the old may indulge a calm recreation, and the young be greatly delighted. And there all, as they gaze on the various works of Him "without whom nothing was created," may "look through Nature up to Nature's God," and exclaim: "In wisdom hast thou made them all."

A TRUTH.

With what a scornful disregard of wealth, and the position of the moment, Almighty God scatters the priceless gifts of genius among his children! The great poet, the illustrious statesman, the eloquent orator, is as likely to go forth from the brown-faced laborer's cottage over the way, as from the sumptuous palaces of the capital. The future ruler of an empire may be unconsciously digging in yonder field; and this very school may be, under God, the appointed means of revealing his unsuspected destiny to him and the world.—*Professor Felton.*